

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 10-010513

(43)Date of publication of application : 16.01.1998

(51)Int.Cl.

G02F 1/1335

G02F 1/1335

G02B 5/30

(21)Application number : 08-167388

(71)Applicant : NEC CORP

(22)Date of filing : 27.06.1996

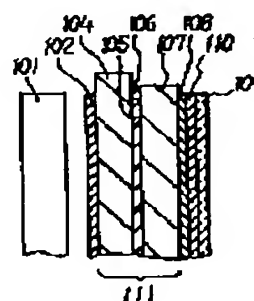
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(54) TRANSMISSION TYPE LIQUID CRYSTAL DISPLAY DEVICE

(57)Abstract:

PROBLEM TO BE SOLVED: To obtain a display with a wide visual field which has oblique black flotation suppressed and contrast made high and is free of gradation inversion in its downward direction by adding a phase difference film and a light diffusion layer.

SOLUTION: The phase difference film 108 which is provided between a color filter substrate 107 and a polarizing plate 110 has optically negative characteristics, and the optical axis may be in the direction as the normal of the film 108 or slanted. Polarizing plates 102 and 110 have their transmission axes shifted by 90° (in normally white mode) and are placed opposite each other across a liquid crystal panel 111 and the film 108. A light diffusion layer 109 is provided outside the polarizing plate 110. In this case, the film 108 suppress the black flotation phenomenon to make a blackish display and increase the contrast in oblique directions. Further, light emitted by the film 108 is transmitted through the polarizing plate 110 and diffused by the light diffusion layer 109, so much light nearby the front is mainly diffused to make the quantity of light uniform.



LEGAL STATUS

[Date of request for examination] 27.06.1996

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number] 2822983

[Date of registration] 04.09.1998

[Number of appeal against examiner's decision]

of rejection]

[Date of requesting appeal against examiner's
decision of rejection]

[Date of extinction of right]

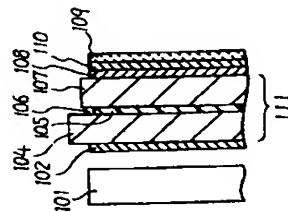
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特開平10-10513

(49) 公開日 平成10年(1998)1月16日

(21) 出願番号 特願平8-167368
平成8年(1996)6月27日
(22) 出願日

【課題】コントリアト板下を叩き、時間反転を無くす。
【解決手段】面光源101、液晶パネル111と、偏光板102、110と、位相差フィルム108、光拡散板109で構成される投影依存性を改善した透過型液晶表示装置である。位相差フィルム108で黒表示の消きを抑え、光拡散板109で時間反転を無くしている。



- 101... 西光澤
102... 隅光板
104... アクリル・ガラス基板
105... TN 液晶
107... カラー・フィルター基板
108... 位相差フィルム
109... 光吸収層
110... 偏光板
111... 液晶パネル

